



Dear Valued Customer,

## i3070 In-Circuit Test Software release 10.20p Release Notes

Keysight Technologies is pleased to introduce the latest software release 10.20p for new and existing i3070 in-circuit testers. This software release can be installed on test systems and test development stations running Windows 10 Pro 64-bit or Windows 10 Enterprise 64-bit operating systems.

Some of the key highlights in this release are:

- i3070 software is now supported on Window 10 Enterprise as well. (ICT-142)
- New debug tool: able to generate log file to record test times for selected tests. (ICT-183)
- A few key improvements in Board Test Insight:
  - Option to perform Autoload on startup. (ICT-168)
  - Able to change values across multiple board versions. (ICT-128)
  - Able to customize UI layout. (ICT-172)
  - Able to sort CPK by value. (ICT-83)
- New ControlXTPB card firmware (version 21042216\_1) to fix shorts test failure and DGN errors in Unmux systems. (ICT-163/ICT-166)
- i3070 online help is supported on multiple browsers: Microsoft Edge, Firefox (3+), Chrome (1+) and Internet Explorer (10+). (ICT-88)

All the major improvements and enhancements in release 10.20p are listed in appendix A. For detailed information, please refer to the i3070 10.20p online help.

As always, I'd like to take this opportunity to thank you for your continuous support and look forward to providing you with more value-added features and services.

Yours faithfully,

A handwritten signature in blue ink, appearing to read "Eric Chua".

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# Keysight i3070 In-Circuit Test System

## i3070 10.20p Software Release

### System Requirements

The minimum hardware and software requirements for the installation of the i3070 10.20p software release are as follows:

**Table 1 Minimum Requirements**

<b>Platform</b>	Windows 10 Pro (64-bit) version 1903 or later Windows 10 Enterprise (64-bit) version 1903 or later
<b>Hardware</b>	Processor – recommended Intel Core i5 (4th Generation or newer) or equivalent Memory – recommended 8 GB RAM (minimum 4 GB RAM) Disk space – recommended 10 GB, must be on drive C
<b>Other</b>	Minimum screen resolution – 1280 x 1024 pixels Color quality – at least 16-bit Language setting: Must be English (United States)

**NOTE**

If you are upgrading a controller to Windows 10, ensure that it meets Windows 10 system requirements and there are no compatibility issues.

## Software Licenses

Note that software release 10.00p or later has a new license string format, however the software features and functionality remain the same.

### Existing license string example

```
FEATURE i3070Mux_System_TestHead agIntict 09.20 permanent uncounted \  
  HOSTID=14abc59b6617 NOTICE="Licensed to Keysight Technologies" \  
  TS_OK SIGN=81A51B84CC18
```

### New license string example

```
# Product: K8203A-1FP K8203A, i3070 Mux System Testhead, GTE 10.00p,  
node-locked perpetual license Expires: permanent  
FEATURE i3070Mux_System_TestHead agilesofd 1.0 permanent uncounted  
VENDOR_STRING="14ABC59B6617 : OGSIWKY PSUIMEJ 2HFKJKL NFBGVYI SDTF2NG  
VZBUJZE LGCYPBH JEUJMGW 2IUCN" HOSTID=14abc59b6617  
ISSUER=LICENSEID=3341316 ISSUED=08-Jul-2019 START=08-Jul-2019 TS_OK  
SIGN="0081 B90C 9BEB B799 E81D 7A57 B0EC 8408 F8DF 127B 9F03 710A 3071  
EB46 5CFE 7D81 F735 A555 BD06 6D3E 923E"
```

Your licenses are redeemable via [www.keysight.com/find/softwaremanager](http://www.keysight.com/find/softwaremanager).

## Compatibility Statement

Existing board test programs that run on 3070 or i3070 systems with earlier software releases (10.xx, 09.xx, 08.xx and 07.xx) will continue to run on software release 10.20p.

Board test programs developed on Windows-based software releases prior to 05.40p should be converted to run on release 05.40p at the minimum, before running them on systems with i3070 software release 10.20p or later.

## Appendix A: Improvements and Enhancements

Improvements and enhancements in the i3070 10.20p software based on customer requests are listed below.

<b>ID</b>	<b>Description</b>
ICT-31	Documentation: Use lowercase “no” in the setting “mpa.VtepEnabled: no” in .hp3070 config file to generate nanoVTEP fixture.
ICT-41	Fixed: Directory Permission Error.
ICT-66	Fixed: BTI: Editing test with sense wires causes removal of “#%” in node name.
ICT-83	BTI: Sort CPK by value.
ICT-88	Fixed: Lack of supported browsers for i3070 online help.
ICT-94	Fixed: Board Consultant removes all “Nodes” in board after “save board files”.
ICT-128	BTI: Able to change values across multiple variants.
ICT-142	i3070 Software will support Windows 10 Enterprise.
ICT-144	Add an option to disable the IPG test limits calculation; just use the limits stated in board file or in library.
ICT-156	DGN: T2340 fails on power supply 6621 in release 9.10p.
ICT-158	Fixed: CAD related files converted to JSON has empty array for nodes and devices.
ICT-159	Fixed: “number” command causes “R32 Software internal error 104”.
ICT-160	Fixed: BTI: Error during “compile and go”, not able to create object file.
ICT-161	Fixed: i3070 AE crashes due to customized testplan which outputs non-compliant content in log file.
ICT-163	Fixed: DGN test T2828 freezes in i3070 tested with ControlXTPB in an Unmux system.
ICT-166	Fixed with XTPB firmware update: Some shorts cannot be detected during shorts test.
ICT-168	BTI: New option to perform “Autoload” upon startup.
ICT-169	Improvement on throughput on mixed tests with Advanced Throughput Multiplier feature.
ICT-170	Fixed: Analog test source compilation becomes slower with software release 10.00p running on Windows 10.
ICT-171	i3070 software need to function even when Windows firewall is turned on.
ICT-172	BTI should allow user to configure the UI layout.
ICT-173	BTI: Tests with “sense” option do not compile into temporary debug folder.
ICT-174	Fixed: Coverage Analyst data is incorrect for panel.
ICT-177	Fixed: Issue with function (Def) calling DLL.
ICT-178	Fixed: Silicon Nails won't compile if file is too big.
ICT-179	Fixed: BT-Basic error F32 with serial port.

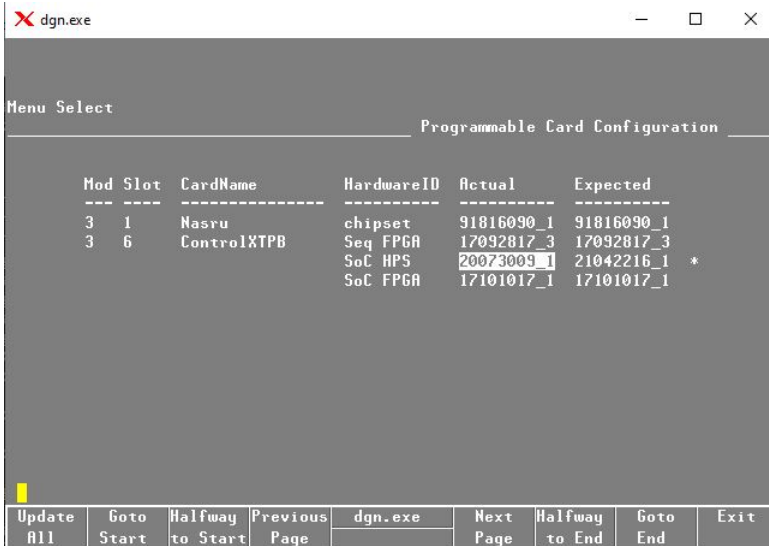
ID	Description
ICT-180	Fixed: Coverage Analyst marks tests as not testable although they are found in learn file.
ICT-181	nanoVTEP needs orientation mark information in the fixture files.
ICT-182	Fixed: Compiler cannot capture "config" file error.
ICT-183	Generate log file with test time of all the tests.
ICT-184	Fixed: Too large offset for personality pins by IPG in software release 10.xx.
ICT-185	Fixed: After 09.20p release, the probe locator tool does not work.
ICT-186	New option to create socketed personality pins even for non-drilled pins.
ICT-187	Fixed: Probe Select reserves too many extra tooling pins or ppins.
ICT-188	Keep loading dialog box in the front.
ICT-193	Output multiple BTEST data in the Automation Enabler log to capture all retest data.
ICT-194	Multiple log out commands are not captured by the Automation Enabler.
ICT-195	i3070 AE unable to access multiple shared drives.
ICT-196	Restarting i3070 AE run-server.bat or window service requires the system to boot.
ICT-208	Fixed: Erroneous deletion of customer log files by AE.

## Appendix B: Procedure to Update Firmware for ControlXTPB Card

An update for the ControlXTPB card firmware is distributed with this release. The firmware files are *XTPB\_SoC\_HPS\_Mux.img* and *XTPB\_SoC\_HPS\_UnMux.img* (for Mux and Unmux systems respectively). They can be found in the folder *C:\i3070\_ICT\lib*.

After installing i3070 software release 10.20p, follow these steps to update the firmware.

- 1 Launch DGN.
- 2 Click **Configuration > Programmable Card Config**.  
Any available firmware updates is highlighted as shown below.



The screenshot shows a window titled 'dgn.exe' with a menu bar and a table of hardware components. The table has columns for Mod Slot, CardName, HardwareID, Actual, and Expected. The 'Actual' column for 'SoC HPS' is highlighted in yellow, indicating a firmware update is available. The 'Expected' column for 'SoC HPS' has an asterisk next to it.

Mod Slot	CardName	HardwareID	Actual	Expected
3 1	Nasru	chipset	91816090_1	91816090_1
3 6	ControlXTPB	Seq FPGA	17092817_3	17092817_3
		SoC HPS	20073009_1	21042216_1 *
		SoC FPGA	17101017_1	17101017_1

At the bottom of the window, there is a navigation bar with buttons: Update All, Goto Start, Halfway to Start, Previous Page, dgn.exe, Next Page, Halfway to End, Goto End, and Exit.

- 3 Click **Update All** to begin the update.
- 4 Whenever the User Account Control dialog box appears, click **Yes** to allow the installation to proceed.  
When installation is completed, the testhead is automatically rebooted.

### NOTE

If your system is running i3070 software release 10.00p or above and you have no immediate plan to upgrade to 10.20p, the ControlXTPB firmware update can still be done independently. The firmware update can be downloaded from <https://www.keysight.com/us/en/search.html/xtpb+firmware>.

## Appendix C: Software Compatibility Matrix

Feature	Unmux	Mux	Remarks
Flash70	√	√	
Advanced Fixturing	√	√	
Silicon Nails	√	√	
Flash ISP	√	√	Needs ControlXTP and above
PLD ISP	√	√	Needs ControlXTP and above
Diagnose Relays	√	√	
System Calibration	√	√	
Interactive Pin Locator	√	√	
Automatic Analog Debug (AutoDebug)	√	√	
AutoOptimizer	√	√	Needs ControlXTP and above
Operator Interface	√	√	
Debug Interface	√	√	
ICT Browser	√	√	
Coverage Analyst	√	√	
Fixture Consultant	x*	√	* Unmux system uses ICT Browser
Board Consultant	x*	√	* Unmux system uses TTM Development Software
Test Consultant	x*	√	* Unmux system uses TTM Development Software
TTM Development Software	√	x*	* Mux system uses Board Consultant, Fixture Consultant and Test Consultant
Pushbutton Debug	√	√	
Access Consultant	√	√	
Part Description Editor	√	√	
Device Test Library	√	√	
BT-Basic Test Language	√	√	
Setup Test Editor	√	√	
Analog Test Language	√	√	
Analog Test Language	√	√	
Vector Control Language	√	√	
Pattern Capture Format	√	√	
Digital In-circuit Test	√	√	
Analog Functional Test Language	√	√	
IPG-II Program Generator	√	√	
Multiple Board Versions	√	√	
Dual-Well Shared Wiring	√	√	



<b>Feature</b>	<b>Unmux</b>	<b>Mux</b>	<b>Remarks</b>
Short-wire Fixture Technology	√	√	
Board Test Grader	√	√	
Datalogging	√	√	
DataLog Converter	√	√	Available on 08.40p and later
Board Test Insight	√	√	Available on 09.00p and later
Pushbutton Q-STATS	√	√	
Advanced Throughput Multiplier	√	√	
Automation Enabler	√	√	Industry 4.0 supported standards: IPC-CFX, Hermes, iLNB, MQTT, REST-API, AMQP
Networked Licensing	√	√	
Advanced Probe Spacing	√	√	
Automatic 6 Wire Analog ICT Tests	√	√	
Automatic Digital Test Generation	√	√	
Safeguard ICT Analysis	√	√	
Quick Report	√	√	
System Configuration and Hardware Diagnostics	√	√	
RS232 Control	√	√	

## Appendix C: Hardware Compatibility Matrix

Feature	Unmux	Mux	Remarks
ASRU Rev C	x*	x*	Discontinued, not tested.
ASRU Rev D	x*	x*	Discontinued, not tested.
ASRU Rev N	√	√	Works with ControlXTP and 08.00p or later
N1139A PDU	√	√	
ControlXTP	x*	x*	Discontinued, not tested.
ControlXTPA	√	√	Works on 08.30pb or later
ControlXTPB	√	√	Works on 10.00p or later
HybridPlus DD 6/12/20 MP/s	x	√	
HybridPlus 144 unmux	√	x	
AnalogPlus (DD)	x	√	
AccessPlus (SD)	x	√	
Utility Card	√	√	Works on 08.00p or later
LED Measurement Analyzer	√	√	Works on 08.30p or later
Guided Probe and Footswitch	√	√	
Strip Printer	√	√	
Debug Ports	√	√	
Functional Test Access Ports	√	√	
Performance Port	√	√	
DUT Power Supplies			
6621A, 6624A, 6634B, 6642A	x*	x*	Discontinued, partially tested.
N5747A	√	√	Works on 08.20p or later
N6751A, N6752A, N6746A, N6773A	√	√	Works on 08.40p or later
Vacuum	√	√	
Compressed Air Quick Connect Tap	√	√	
2mod Inline Board Handler	√	√	Use 09.00p or later to develop fixture/program
4mod Inline Board Handler	√	√	Use 10.00p or later to develop fixture/program
HP rp5810 PC controller	√	√	
HP engage flex PC controller	√	√	Use 10.00p or later to develop fixture/program





This information is subject to change without notice.

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